

Flower Garden Banks National Marine Sanctuary - Education and Outreach Program

A focus group was conducted in 1995 to collect public input regarding how the Flower Garden Banks National Marine Sanctuary's newly established education and outreach program should focus its limited human and monetary resources. Participants concluded that while all identified audiences were important, emphasis should initially be placed on recreational divers (as the largest direct user group of the sanctuary) and teachers (because of the large number of future voting citizens they have the opportunity to reach, year after year.) Consequently, the most well developed programs are for teachers and divers. As part of the management plan review, the Education/Outreach Working Group is reviewing and assessing the existing sanctuary education and outreach program. Based on the group's ultimate recommendations, and programmatic mandates, the sanctuary education and outreach team will adjust the focus to meet current sanctuary management and resource protection needs. Following is a description of existing programs.

Audiences: All

- ☞ Web site is intended to meet the informational needs of all target audiences and offers information such as descriptions of regulations, sanctuary habitats, reef etiquette, how to get there, current research, real-time weather conditions, lesson plans, kids activities, etc.
- ☞ Information packets available upon request - may include the following:
 - color brochures: Flower Garden Banks NMS and National Marine Sanctuary Program
 - narrated video with program overview, followed by unnarrated video of sanctuary denizens
 - copy of rules and regulations
 - list of known dive charter operators that visit the sanctuary

Audience: Recreational divers

- ☞ SeaSpace Dive and Adventure Travel Expo - sanctuary education and outreach team staffs an exhibit, offers seminars about the sanctuary, and participates in the Environmental Awareness section by hosting an activity at the Kids Corner.
- ☞ Naturalist on Board - sanctuary provides training for volunteer naturalists hosted by the recreational dive vessels that visit the sanctuary. The naturalists interact with the divers on board to enhance diver appreciation for the resources by helping identify animals and explain the local ecology, educate divers about appropriate ocean and reef etiquette behaviors, encourage a sense of stewardship for the sanctuary, and let divers know who to contact for more information about the sanctuary.
- ☞ Dive vessel crew training - sanctuary education and outreach team offer a presentation about sanctuary regulations and any programmatic updates as part of the annual training for crew members of the charter dive vessels that operate in the sanctuary.
- ☞ Dive club presentations - sanctuary staff make presentations to dive clubs upon request.
- ☞ Professional development for recreational divers who teach ocean literacy in formal or informal settings.
- ☞ Information packets that include, at a minimum, a video and color brochure, are provided upon request.

Audience: Professional Educators - formal and informal settings (and indirectly students and the general public)

📖 Professional development workshops

- *Down Under, Out Yonder* (Intro and Alumni) workshop for SCUBA certified educators - 2 days of classroom studies with hands-on activities, followed by 2-1/2 days of diving in the sanctuary
- *Corals to Classrooms* workshop for non-SCUBA certified educators - 2 days of classroom studies with hands-on activities
- *Adaptations From the Depths* - 3-hour-long workshop that provides a classroom module and content knowledge for a primary Texas Essential Knowledge & Skills science strand for grades 3-5. Examples from the Flower Garden Banks NMS are used to illustrate animal adaptations.
- *ROV-ing National Marine Sanctuaries* workshops use either Lego robotics or PVC pipe and other easily obtained materials to design and construct remotely operated vehicles (ROVs) to illustrate how ROVs are used to help manage and protect sanctuary resources.

📖 Conferences

- Texas Conference for the Advancement of Science Teaching - sanctuary education team staffs an exhibit where teachers can pick up lesson plans and participate in a quick hands-on activity used in one of the lesson plans. Staff may also participate in the marine science strand of concurrent sessions hosted by Texas Marine Education Association.
- Texas Marine Education Association - sanctuary staff interacts with TMEA members and occasionally coordinates one of the quarterly professional development workshops.
- Annual national conferences such as National Science Teachers Association, National Marine Educators Association, and North American Environmental Education Association - sanctuary staff generally participates in at least one national education conference each year. Participation may include staffing a NOAA/Sanctuaries exhibit and/or presenting a concurrent session(s).

Audience: Students

- 📖 Presentations - group presentations to students are offered as staff availability allows.

Audience: Oil and Gas Industry

- 📖 Industry Government Expedition (IGE) - annual information transfer meeting and SCUBA expedition to the sanctuary. Representatives from industry, federal and state government, academia, and non-profit organizations interested in the well being of the Flower Garden Banks NMS meet to exchange the latest information in their respective areas of expertise and see first hand the natural resources of the sanctuary. Offers individuals an opportunity to develop strong professional working relationships before they potentially interact in an emergency response situation.
- 📖 Occasionally provide presentations during platform crew trainings, upon request.

Audience: Interested Public

- ☞ Exhibits and presentations at various public venues, primarily aquariums.
 - Tennessee Aquarium (Chattanooga) - worked with staff during development of 600,000-gallon replica of the Flower Garden Banks and associated interpretive signage. Sanctuary hosted a workshop for aquarium staff that included a SCUBA diving experience in the sanctuary. Sanctuary staff continues to provide technical expertise, as needed, relevant classroom resources for aquarium teacher workshops, and occasional in-person presentations for teacher workshop, special events for aquarium members, and staff/docent training.
 - Aquarium at Moody Gardens (Galveston) - sanctuary education/outreach team works periodically with aquarium staff to co-host or participates in teacher workshops, public events, and presentations. Both teams are working to integrate national marine sanctuary information into existing exhibits that feature habitats found in one of the 14 sanctuary program sites.
 - Texas State Aquarium (Corpus Christi) - has a model of the Flower Garden Banks. Sanctuary staff is currently exploring possibilities for enhancing the interpretive aspects of the exhibit. Sanctuary education/outreach team works periodically with aquarium staff to co-host or participates in teacher workshops, public events, and presentations.
 - Audubon Aquarium of the Americas (New Orleans) - prior to Hurricane Katrina, sanctuary staff worked with aquarium to develop interpretive signage and video about the Flower Garden and Stetson Banks. Most, if not all, of these exhibits were destroyed during the hurricane. No definite plans have been made to replace these exhibits.

Audience: Outdoor Enthusiasts (boaters, fishers, divers, kayakers, bird watchers, etc.)

- ☞ Texas Wildlife Expo - sanctuary partners with Texas Parks & Wildlife Department to host the "Flower Garden Banks Virtual Dive" in the *Ranches to Reefs* tent at the annual Wildlife Expo. In 2006, approximately 2,000 visitors (typically outdoor activity enthusiasts) toured the virtual reef and completed an "animal population survey" of the "reef."

Audience: Other Government Agencies

- ☞ Sanctuary research and management staff provides training to U.S. Coast Guard team responsible for providing enforcement for the sanctuary.

Audience: Fishers - Recreational and Commercial

- ☞ No cohesive sanctuary education/outreach program currently exists for this audience. Staff is working with the Education Outreach Working Group, other members of the Sanctuary Advisory Council, representatives from the recreational fishing community, and interested members of the public to develop one.